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David M. Alpern

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EXAMINER

LEROUX, ETIENNE PIERRE

ART UNIT

PAPER NUMBER

2161

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 09/881,501	<b>Applicant(s)</b> ALPERN ET AL.	
	<b>Examiner</b> Etienne P. LeRoux	<b>Art Unit</b> 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-7, 9-12, 14-16, 18-21, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 8, 13, 17 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

***Claim Status***

Claims 5-24 are pending

***Claim Objections***

Claims 8, 13, 17 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 8, 17 is allowable because claim 8 recites the request includes an SQL statement; the form required :for execution is a cursor; and in the step of modifying the form, the cursor is marked for redirection.

Claim 13 is allowable for being dependent from allowable claim 8.

Claim 22 is allowable for being dependent from claim 17.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

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art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 6, 19 recites “the request includes a specifier referring to an object that is not present in the particular database system.” Above limitation is not supported by the specification.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 5-7, 10-12, 15, 16, 19-21 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Laux (US 2001/0004737).

Regarding claim 5, 15, 20, Laux discloses:

A method employed in a distributed database system [refer NPL definition]

[Laux, Fig 1, paragraph 20, method 130 for accessing multiple data sources 140, 150, 160, 170, paragraph 2, the present invention relates to the access of a database having multiple data sources, paragraph 62, data sources are distributed across a network 104, paragraph 8, the multiple data sources can be databases which are separate from one another, the multiple data sources may be in different locations, may be different kinds]

that includes a plurality of database systems

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[Laux, Fig 1, database system = driver 120 + data source 140, database system = driver 121 + data source 150, database system = driver 122 + data source 160, database system = driver 123 + data source 170, paragraph 8, the multiple data sources can be databases and may require the use of different query engines to access their data]

for responding to a request received in a particular database system of the plurality,

[Laux, Fig 1, paragraph 62, method 130, client device 100, access operations may be initiated using client device 100 while some or all operations of method 130 are carried out on a server computer 180A accessible by client device 100 over data network 104, such as the Internet, paragraph 20, client device 100 is a database system because driver for data source 140 and data source 140 is included].

each database system of the plurality including a query engine [refer NPL definition] and a database and

[Laux, Fig 1, database system = driver 120 + data source 140, database system = driver 121 + data source 150, database system = driver 122 + data source 160, database system = driver 123 + data source 170, paragraph 5, each data source in the plurality of data sources requires a separate driver to access the data source so that there are a plurality of separate drives, paragraph 6, a merging driver receives the single access operation and accesses the plurality of separate drivers through the API and consequently accesses each of the data sources, paragraph 7, the merging driver uses the common API to access the multiple data sources such that the multiple sources can be queried through a single query, paragraph 8, the multiple data sources may be in different locations, may be different kinds and may require the use of different query engines to access their data]

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the method comprising the steps performed in the particular database system's query engine of:

[Laux, Fig 1, computer system 100, method 130, merge driver 125, driver for 140, driver for 150, driver for 160, driver for 170, paragraphs 20-27]

determining when the request is parsed whether an execution of the request is preferably done at least in part in another database system of the plurality; and

[Laux, paragraph 8, the multiple data sources can be databases, which are separate from one another, the multiple data sources may be in different locations, may be different kinds, and may require the use of different query engines to access their data, paragraph 9, a user by a single query (or any other access operation, e.g., editing) can access data which may be distributed over multiple sources, by specifying the sources to be accessed, a user can merge different sources into a virtual database which looks to the user like a single database but which is actually a grouping of several databases or sources selected by the user so that a single query can provide the user with results which are retrieved from different sources].

if that is the case, redirecting that part of the execution to the other database system.

[Laux, paragraph 8, the multiple data sources can be databases, which are separate from one another, the multiple data sources may be in different locations, may be different kinds, and may require the use of different query engines to access their data, paragraph 9, a user by a single query (or any other access operation, e.g., editing) can access data which may be distributed over multiple sources, by specifying the sources to be access, a user can merge different sources into a virtual database which looks to the user like a single database but which is actually a grouping of several databases or sources selected by the user so that a single query can provide the user with results which are retrieved from different sources].

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Regarding claim 6, 19, 24, Laux discloses wherein the request includes a specifier referring to an object that is not present in the particular database\_system and the step of determining whether the execution of the request is preferably done in the other database system determines that the object required for execution of the request [Laux, paragraph 45]

Regarding claim 7, 16, 21, Laux discloses placing the request in a form required for execution in the particular database system; modifying the form when it has been determined that the request is preferably executed at least in part in the other database system; and in the step of redirecting, the modified form is redirected [paragraphs 7-9]

Regarding claim 10, 11, 12, Laux discloses the data storage device contains code which when executed by a processor performs the method set forth in claim 5 [paragraph 63].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 14, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laux in view of Vange (US 2002/0002603).

Regarding claim 9, 18, 23, Laux discloses the elements of the claimed invention as noted above but does not disclose the request includes a call to a procedure object; and in the step of modifying the form, the call is rewritten in the form required for execution as a remote procedure call directed to the other database system [Vange, claim 8]. It would have been obvious to one

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of ordinary skill in the art at the time the invention was made to modify Laux to include the request includes a call to a procedure object; and in the step of modifying the form, the call is rewritten in the form required for execution as a remote procedure call directed to the other database system as taught by Vange for the purpose of generating a remote procedure call directed to the storage mechanism [claim 8].

Regarding claim 14, Vange discloses the data storage device contains code which when executed by a processor performs the method set forth in claim 9 [Vange, paragraphs 24, 62]

### ***Response to Arguments***

Applicant's arguments filed 8/24/2010 have been considered but are not persuasive for the following reasons.

Applicant argues that Laux does not disclose “database system’s query engine.”

Examiner is not persuaded. USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). One of ordinary skill in the art understands a “query engine” is software or program code which retrieves data from a database management system (DBMS). Refer attached definition from Microsoft Computer Dictionary, Fifth Edition. Laux discloses the following:

[0005] According to an aspect of the present invention there is provided a method for accessing a plurality of data sources by a single access operation or query. Each data source in the plurality of data sources requires a separate driver to access the data source so that there is a plurality of separate drivers. Each driver in the plurality of separate drivers uses an application programming interface (API). The API is substantially identical for each of the drivers in the plurality of separate drivers.



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[0006] A merging driver receives the single access operation. In response to the single access operation, **the merging driver accesses the plurality of separate drivers through the API and consequently accesses each of the data sources.** In one embodiment, a user selects each data source to be included in the plurality of data sources.

[0007] **The provision of the merging driver provides a kind of a "virtual" database, where multiple sources requiring individual drivers are accessed under the roof of a common API. The merging driver uses the common API to access the multiple sources such that the multiple sources can be queried through a single query. An application program or a user interface may access the merging driver through its API to access multiple sources by a single access operation.**

[0008] The multiple data sources can be databases, which are separate from one another. The multiple data sources may be in different locations, may be different kinds, and may require the use of different query engines to access their data.

[0009] **A user by a single query (or any other access operation, e.g. for editing) can access data, which may be distributed over multiple sources.** By specifying the sources to be accessed, a user can "merge" different sources into a "virtual" database, which looks to the user like a single database, but which is actually a grouping of several databases or sources selected by the user, so that a single query can provide the user with results, which are retrieved from different sources.

Examiner has correctly mapped "query engine" to "merging driver" because Laux discloses:

- (1) the merging driver accesses the plurality of separate drivers through the API and consequently accesses each of the data sources.
- (2) an application program or a user interface may access the merging driver through its API to access multiple sources by a single access operation.
- (3) a user by a single query can access data which may be distributed over multiple sources.

Applicant argues that Laux does not disclose "whether an execution of the request is preferably done at least in part in another database system of the plurality." Examiner is not persuaded. Laux discloses:

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[0006] A merging driver receives the single access operation. In response to the single access operation, **the merging driver accesses the plurality of separate drivers through the API and consequently accesses each of the data sources.** In one embodiment, a user selects each data source to be included in the plurality of data sources.

[0007] **The provision of the merging driver provides a kind of a "virtual" database, where multiple sources requiring individual drivers are accessed under the roof of a common API. The merging driver uses the common API to access the multiple sources such that the multiple sources can be queried through a single query. An application program or a user interface may access the merging driver through its API to access multiple sources by a single access operation.**

[0008] The multiple data sources can be databases, which are separate from one another. The multiple data sources may be in different locations, may be different kinds, and may require the use of different query engines to access their data.

[0009] **A user by a single query (or any other access operation, e.g. for editing) can access data, which may be distributed over multiple sources.** By specifying the sources to be accessed, a user can "merge" different sources into a "virtual" database, which looks to the user like a single database, but which is actually a grouping of several databases or sources selected by the user, so that a single query can provide the user with results, which are retrieved from different sources.

Laux anticipates "whether an execution of the request is preferably done at least in part in another database system of the plurality" because Laux discloses:

- (1) a user selects each data source to be included in the single query of the plurality of data sources
- (2) an application program or user interface may access the merging driver through its API to access multiple data sources by a single access operation
- (3) by specifying the sources to be accessed a user can merge different sources into a virtual database
- (4) a single query provides the user with results which are retrieved from different sources.

Examiner Analysis:

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Examiner maintains that Laux teaches and clearly suggests “whether an execution of the request is done at least in part (emphasis added) in another database system.

Applicant states “the request includes a specifier referring to an object that is not present in the particular system” of claims 6 and 19 is supported in overview at page 12, line 6 – page 13, line 14. Furthermore, applicant directs examiner to specification page 15, line 31 – page 18, line 6.

Examiner failed to find support for the claimed “specifier referring to an object that is not present in the particular database system.” One of ordinary skill in the art would consider that above limitation does not make sense because searching for an object which is not present in a database is an exercise in futility.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne P. LeRoux whose telephone number is (571) 272-4022.

The examiner can normally be reached on Monday through Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Etienne P LeRoux/  
Primary Examiner, Art Unit 2161

9/28/2010